

SOFTWARE ERROR EXPERIMENT

COMPUTER SCIENCE DATA SYSTEMS TECHNICAL SYMPOSIUM

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N87-29126

LANGLEY RESEARCH CENTER

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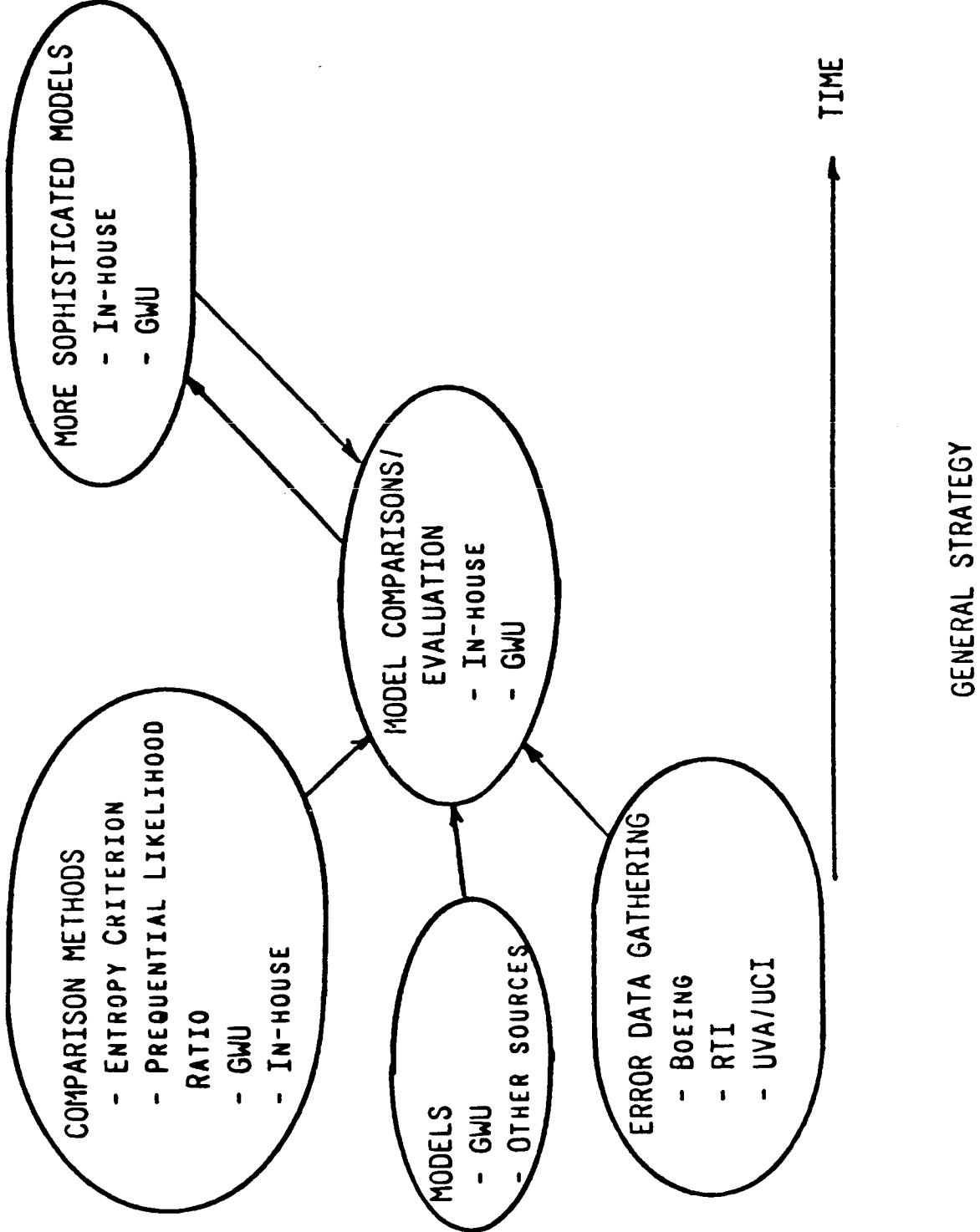
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SOFTWARE RELIABILITY STUDIES

GOAL

TO DEVELOP ANALYTIC METHODS TO PROVE PERFORMANCE PROPERTIES
AND MEASURE RELIABILITY PROPERTIES OF SOFTWARE

SOFTWARE RELIABILITY STUDIES



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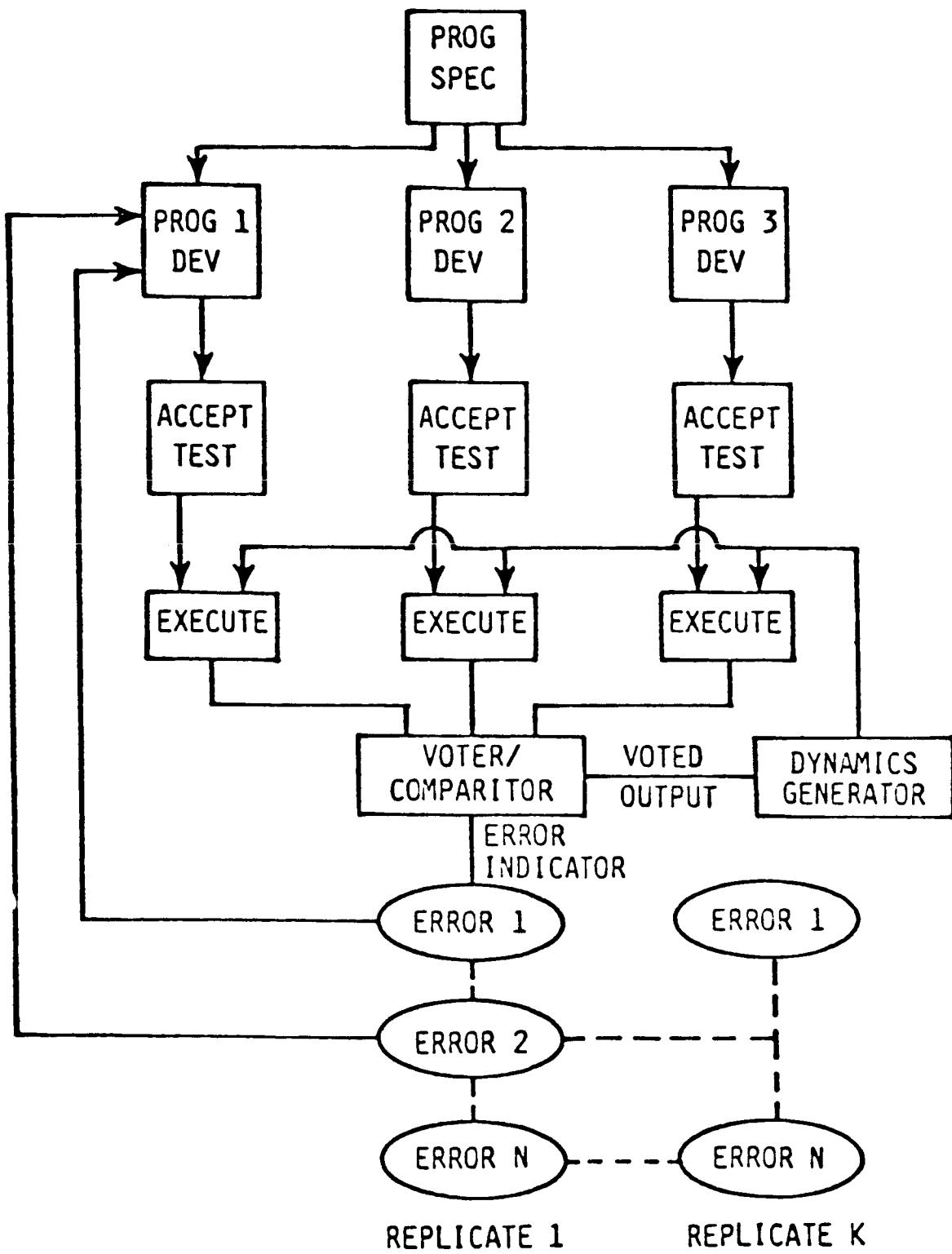
SOFTWARE RELIABILITY STUDIES

IMPORTANCE OF RESEARCH

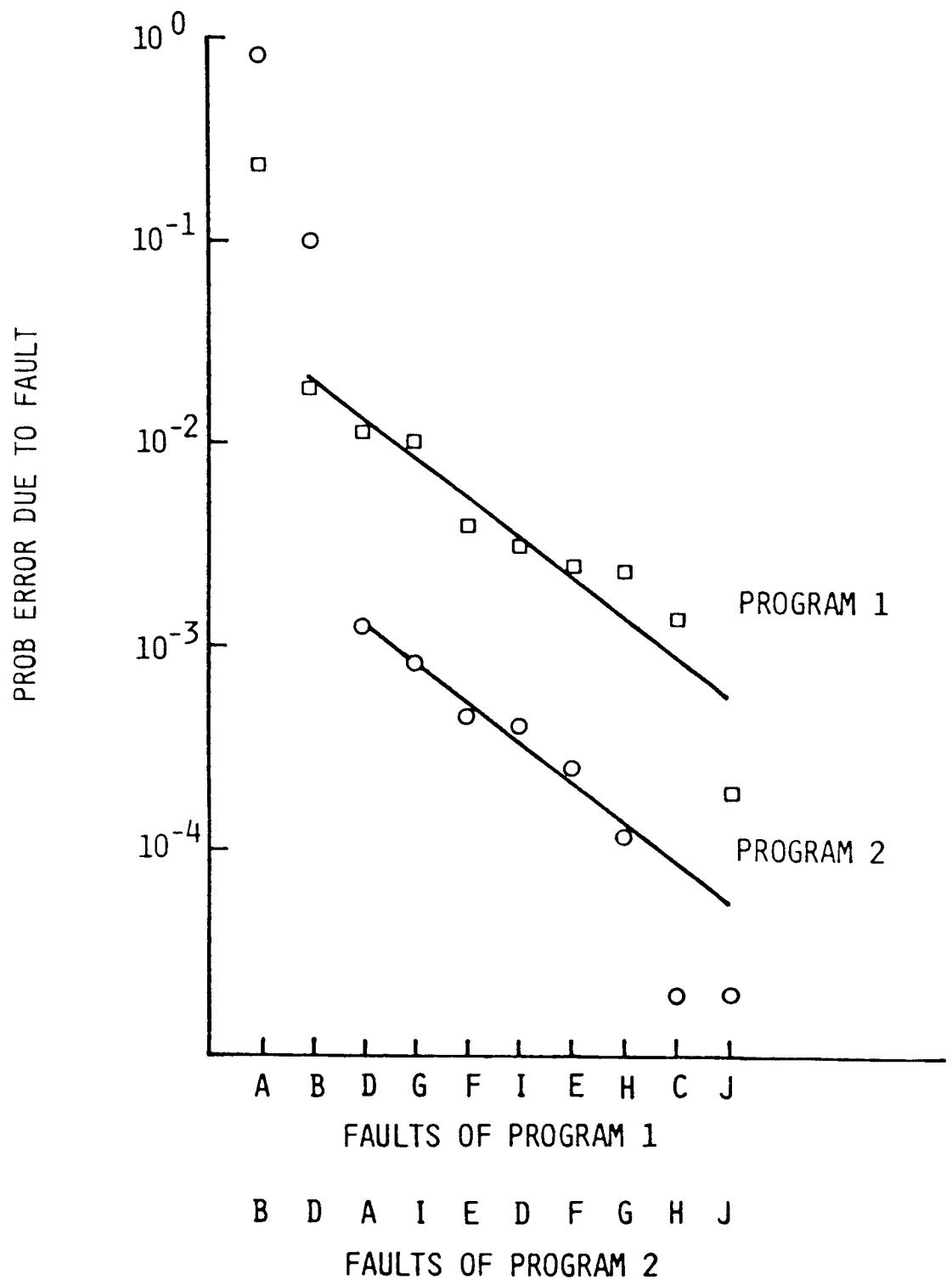
SOFTWARE IS ONE OF THE ELEMENTS WHOSE UNRELIABILITY CHARACTERISTICS NEED TO BE EVALUATED IF ESTIMATES OF AVIONICS SYSTEMS UNRELIABILITY ARE TO BE BELIEVABLE.

OF THE SOFTWARE RELIABILITY MODELS PROPOSED IN THE PAST DECADE, NONE HAS YET BEEN SHOWN TO BE ADEQUATE FOR PREDICTION/ESTIMATION PURPOSES IN THE CONTEXT OF HIGHLY RELIABLE SYSTEMS.

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PRELIMINARY RESULTS OF THE SOFTWARE REPETITIVE RUN EXPERIMENT



SOFTWARE ERROR EXPERIMENTS

FUTURE PLANS

- 0 ANALYZE DATA FROM ADDITIONAL VERSIONS
- 0 GENERATE MULTIPLE VERSIONS OF CONTROL PROBLEM
- 0 DEVELOP MORE SOPHISTICATED MODEL